

EPI Update for Friday, April 22, 2016
Center for Acute Disease Epidemiology (CADE)
Iowa Department of Public Health (IDPH)

Items for this week's EPI Update include:

- **Global replacement - trivalent with bivalent polio vaccine**
- **Updated adult lead reference level**
- ***Elizabethkingia* cluster in the Midwest**
- **CDC Zika and pregnancy infographic – in Spanish**
- **Meeting announcements and training opportunities**

Global replacement - trivalent with bivalent polio vaccine

Part of the Global Polio Eradication Initiative's strategic plan for 2013-18 called for a worldwide switch from trivalent oral polio vaccine (tOPV) to bivalent oral polio vaccine (bOPV). This switch is part of a bigger objective that starts by introducing inactivated polio vaccine (IPV), and ends with withdrawing all oral polio vaccines once all wild polioviruses have been eradicated.

Due to the success of tOPV, which contains all three poliovirus serotypes (1, 2, and 3), there has not been a case of wild poliovirus type 2 since 1999 and the last detected case of wild poliovirus type 3 was in 2012. On rare occasions in under-immunized populations with inadequate sanitation, the vaccine-virus excreted by immunized children can spread among a community long enough to mutate into a form that can cause paralysis. This is called circulating vaccine-derived poliovirus (cVDPV). Over 90 percent of cVDPV polio cases are due to type 2, so switching to bivalent vaccine, which does not contain type 2, will greatly reduce cVDPV.

Inactivated polio vaccines (IPV) were introduced in places like the U.S. in routine immunizations schedules. IPV protects against poliovirus types 1, 2, and 3 which will maintain population immunity against type 2 polio after the switch to bOPCV without causing cVDPV. The timeline of the eradication and endgame strategic plan calls for polio eradication by 2018 and withdrawal of oral polio vaccine by 2020.

For more information, visit

www.who.int/immunization/diseases/poliomyelitis/endgame_objective2/en/.

Updated adult lead reference level

Occupational lead exposure is an important health problem and can cause adverse effects which range from asymptomatic changes in organ function to life-threatening intoxication. Lead exposure at low doses can lead to adverse cardiovascular, kidney, and reproductive effects, as well as cognitive problems. Current research has found decreased renal function associated with blood lead levels (BLLs) at 5 µg/dL (micrograms per deciliter) and lower, and increased risk of hypertension and essential tremor at BLLs below 10 µg/dL.

In 2015, the CDC's National Institute for Occupational Safety and Health (NIOSH) designated a BLL ≥ 5 $\mu\text{g/dL}$ as elevated (previously it was ≥ 10 $\mu\text{g/dL}$). This level has been adopted by the Iowa Adult Blood Lead Epidemiology and Surveillance (ABLES) program.

The U.S. Occupational Safety and Health Administration (OSHA) Lead Standards require workers to be removed from lead exposure when BLLs are equal to or greater than 50 $\mu\text{g/dL}$ in the construction industry or 60 $\mu\text{g/dL}$ in general industry, and allow workers to return to work when the BLL is below 40 $\mu\text{g/dL}$. HHS recommends that BLLs among all adults be reduced to <10 $\mu\text{g/dL}$. Data from the National Health and Nutrition Examination Survey (NHANES) show the average BLL (geometric mean) of all adults in the United States in 2009–2010 was 1.2 $\mu\text{g/dL}$. For a visual reference, visit www.cdc.gov/niosh/topics/ables/pdfs/Reference%20Blood%20Levels%20for%20Adults-2015-12-18_508.pdf.

Health care providers should be aware that OSHA Lead Standards give flexibility to tailor special protective procedures to the needs of individual employees. The most current guidelines for management of lead-exposed adults should be implemented at the current CDC/NIOSH reference BLL of 5 $\mu\text{g/dL}$. For more information, visit idph.iowa.gov/lpp/surveillance or call 800-972-2026.

***Elizabethkingia* cluster in the Midwest**

Since January 2016, an investigation into two outbreaks caused by *Elizabethkingia anophelis* in three midwestern states has been occurring. In Wisconsin, Illinois and Michigan, there have been 59 confirmed cases, including 18 deaths in Wisconsin, and one each in Michigan and Illinois. The other outbreak occurred in 10 Illinois residents, six of whom have died. The strains of *Elizabethkingia* in these outbreaks are different.

Most of the patients in these outbreaks are over the age of 65 years and have serious health conditions. It has not been determined if the deaths were caused primarily by the bacteria, the patients' other health conditions, or a combination.

Elizabethkingia anophelis is a common organism in the environment that rarely causes infections. Iowa has not received any reports of illness related to *Elizabethkingia*. For more information, visit www.cdc.gov/elizabethkingia/outbreaks/index.html.

CDC Zika and pregnancy infographic – in Spanish

This week's infographic is a Spanish version of the one provided in the Update last week. Although the infographic focuses on those planning to travel, it also has useful information for pregnant women who have returned from Zika-affected areas (e.g., symptoms and preventing sexual transmission).

¿ESTÁ EMBARAZADA? Lea esto antes de viajar



Lo que sabemos sobre el virus del Zika

- ♦ El virus del Zika puede pasar de la madre al feto durante el embarazo.
- ♦ La infección por el virus del Zika durante el embarazo se ha asociado a defectos de nacimiento en los bebés.

with mosquito.

El virus del Zika se propaga principalmente por la picadura de un mosquito infectado de la especie *Aedes*.

- » Estos mosquitos pican agresivamente durante el día y también pueden picar por la noche.
- ♦ No ha habido transmisión local del virus del Zika en el territorio continental de los EE. UU.
- ♦ No hay una vacuna para prevenir la infección por el virus del Zika ni medicamentos para tratarla.
- ♦ El virus del Zika se puede transmitir de un hombre a sus parejas sexuales.



Lo que no sabemos sobre el virus del Zika

- ♦ Si existe un periodo seguro durante el embarazo para viajar a áreas con Zika.
- ♦ Si viaja y se infecta, qué probabilidad hay de que el virus infecte al feto y si su bebé tendrá defectos de nacimiento por la infección.

Aviso para viajeros

Los CDC han emitido un aviso para viajeros (nivel 2, intensifique las precauciones) dirigido a las personas que viajen a áreas donde se está propagando el virus del Zika.

- ♦ Para obtener una lista actual de lugares con brotes de Zika, consulte

To access this infographic, visit
www.cdc.gov/zika/pdfs/zika-pregnancytravel-sp.pdf.

Meeting announcements and training opportunities
None.

Have a healthy and happy week!
Center for Acute Disease Epidemiology
Iowa Department of Public Health
800-362-2736